



The rising tide: Assessing the risks of climate change and human settlements in low elevation coastal zones

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Year: 2007
Journal: Environment and Urbanization. 19 (1): 17-37

Abstract:

Settlements in coastal lowlands are especially vulnerable to risks resulting from climate change, yet these lowlands are densely settled and growing rapidly. In this paper, we undertake the first global review of the population and urban settlement patterns in the Low Elevation Coastal Zone (LECZ), defined here as the contiguous area along the coast that is less than 10 metres above sea level. Overall, this zone covers 2 per cent of the world's land area but contains 10 per cent of the world's population and 13 per cent of the world's urban population. A disproportionate number of the countries with a large share of their population in this zone are small island countries, but most of the countries with large populations in the zone are large countries with heavily populated delta regions. On average, the Least Developed Countries have a higher share of their population living in the zone (14 per cent) than do OECD countries (10 per cent), with even greater disparities in the urban shares (21 per cent compared to 11 per cent). Almost two-thirds of urban settlements with populations greater than 5 million fall, at least partly, in the zone. In some countries (most notably China), urbanization is driving a movement in population towards the coast. Reducing the risk of disasters related to climate change in coastal settlements will require a combination of mitigation, migration and settlement modification. [<http://sedac.ciesin.org/gpw/docs/McGranahan2007.pdf>]

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Resource Description

Early Warning System:

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

A focus of content

Exposure :

weather or climate related pathway by which climate change affects health

Extreme Weather Event, Human Conflict/Displacement, Sea Level Rise, Temperature

Extreme Weather Event: Flooding

Temperature: Fluctuations

Geographic Feature:

Climate Change and Human Health Literature Portal

resource focuses on specific type of geography

Ocean/Coastal, Urban

Geographic Location:

resource focuses on specific location

Global or Unspecified

Health Impact:

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation, Mitigation

Population of Concern: A focus of content

Population of Concern:

populations at particular risk or vulnerability to climate change impacts

Low Socioeconomic Status

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content